

Epicor ERP Project Blueprint Objective & Blueprint

Ventura (HK) Trading Limited (BD Operations)

For

Version: 1.2

Prepared by: PreTech

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VERSION

Version	Date	Remark
1.0	2024-05-09	New Create
1.1	2024-05-14	Added Section BD-3 and other minor updates
1.2	2024-05-20	Changed the workflow of BD-2
		-

GENERAL INTRODUCTION

This document is mainly summarized according to the user business processes and system functionality Epicor Kinetic system designed pairing process.

The main purpose of this article

- Overview Epicor Kinetic system's main workflow paired.
- Allows the user to confirm the future workflow.
- Can be used as a testing workflow before the system live run.

This document contains the main steps but did not elaborate on the details of the steps. The steps described in this article may have several sub-steps, but the sub-steps are not described in detail here.

This document workflow is based on the existing business processes and Epicor Kinetic system to match and re-design, which suggests that some current workflow may need to make the appropriate changes to the actual situation, requiring the project team needed to coordinate and confirm with the user these processes.

Users need to carefully check and confirm the workflow described herein, confirmed the business sector will be based on this business process run Epicor Kinetic \circ



WORKFLOW ICON

Workflow Icon	Flow Chart Description	Operating flow chart showing	Flow Chart Description
Task 1	System operations		Process Start Point
Task 2	Cross-process operations or sub-processes		Process End Point
Task 3	Custom operations	→	Connection symbol
	Decision job		Form or report
workflow with *	customer specific flow	workflow w/t *	Standard flow



BD - BD OPERATION WORKFLOW

BD-0 BRIEF

In the setup of the group, the role of Bangladesh factory is the subcontractor.

Disregarding the geographical difference, both Dongguan and Bangladesh purchasing teams work as one to fulfill the material requirements.

As a subcontractor of the group, Bangladesh executes the production processes with the materials that own by the Hong Kong all along. Other than production, Bangladesh is also QC centre of the materials purchased by the group.

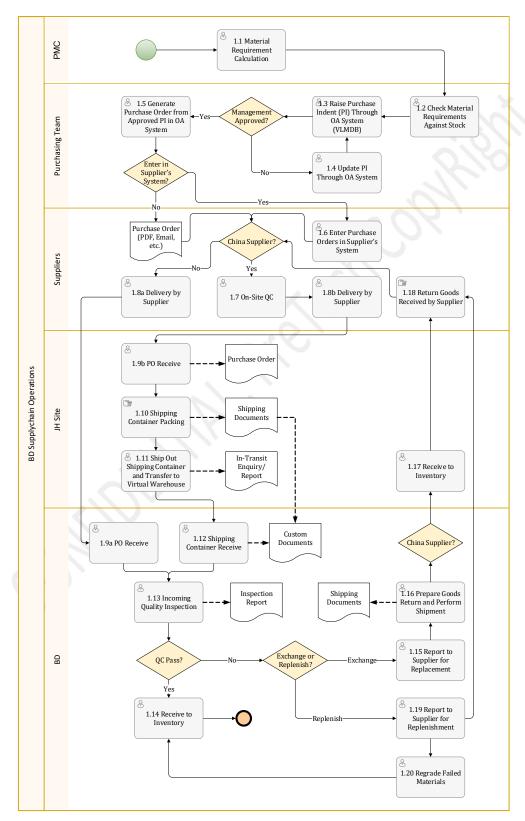
The finished goods are shipped directly from Bangladesh to the customers all over the world. The shipping teams from Dongguan and Bangladesh work closely in providing shipping documents and invoices for the operations.

In this document, the Hong Kong, Dongguan and Bangladesh companies/sites are treated as one entity. However, from the accounting practice, these companies are operated separately, and each will have their own accounting entries. This will be described in a separate document.



BD-1 SUPPLY CHAIN PROCESS

BD1.1 WORKFLOW



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FM1.2 BUSINESS PROCESS MATCHING

	• • • •	ocess – Business Process N	natching		
	s processes participate i				
Step	Step Desc.	Process Condition	Role	Epicor	Expected Result
1.1	Material Requirement Calculation	Calculate material requirements using BOM and order data disregarding inventory	PMS	MRP Calculation, implemented in phases	A full Material Requirement List for purchasing disregarding the inventory availability
1.2	Check Material Requirements Against Stock	Check the availability of the required materials and change the purchase quantity if required.	Purchasing Team	MRP Calculation, implemented in phases	Purchase requirement with ne requirement. QC alert report will be generated for QC to check if some aged materials are still good to use.
1.3	Raise Purchase Indent (PI) Through OA System (VLMDB)	Based on the purchase net requirement from 1.2, the purchase requisitions are entered into the OA System for management approval. 4 levels/persons of approval are required in the current system	Purchasing Team	PO Suggestion from MRP Results and Requisition Entry	Purchase Indent issued for approval
1.4	Update PI Through OA System	If a PI is rejected, it is to be amended based on the reject reason	Purchasing Team	Requisition Entry	Purchase Indent re-issued for approval
1.5	Generate Purchase Order from Approved PI in OA System	After the PIs are approved, POs are generated from the PI.	Purchasing Team	PO Suggestion > PO Generation and PO Entry	Purchase Order created. Send to suppliers by email in PDF format.
1.6	Enter Purchase Orders in Supplier's System	If the supplier requires Ventura to place PO through their dedicated system, purchasing team will place the PO through supplier's system.	Purchasing Team	Need customization, please refer to section BD1.3 point #1	Purchase orders placed to suppliers.
1.7	On-Site QC	If the supplier is in China, JH user will go to the supplier's site to check the quality before the materials are shipping to JH Site	JH Purchasing & QC Team	Need to customize a function, either in PO Entry or a completely new function.	Reduce the chance of quality issue from the suppliers.
1.8a & 1.8b	Delivery by Supplier	Goods delivered by Supplier and the supplier information the shipment date, status and ETA Date.	Purchasing Team	Need to customize the PO Entry function for entering such information. A new report/enquiry function should also be added.	Based on the information provided by the supplier, user can check and bear in mind the status of the delivery.



1.9a	PO Receive (BD Site)	Receive the PO into the QC area and wait for QC	Warehouse Team (BD)	Receipt Entry	Goods received into QC area.
1.9b	PO Receive (JH Site)	Receive the PO into the JH warehouse and wait for packing into containers	Warehouse Team (JH)	Receipt Entry	Goods received into JH warehouse.
1.10	Shipping Container Packing	Pack the goods into the container. The pack containers are normally shipped twice a week.	Warehouse Team (JH)	N/A	Received goods are packed into containers and to be shipped based on schedule.
1.11	Ship Out Shipping Container and Transfer to Virtual Warehouse	The packed containers are shipped physically. In system operations, the goods are transferred to a virtual warehouse. At this stage, this means they are in "in-transit" status.	Warehouse Team (JH)	Transfer Order Entry	Goods ship out from JH Site and on the way to BD Site.
1.12	Shipping Container Receive	The containers arrive at the BD site physically. In system operations, the goods are transferred from the virtual warehouse to BD QC area and wait for inspection.	Warehouse and QC Team	Transfer Order Receipt	Goods received from JH Site into BD Site and wait for QC.
1.13	Incoming Quality Inspection	Perform IQC on materials, no matter they are from local suppliers, overseas suppliers or JH Site.	QC Team	Quality Assurance Module	Determined whether a batch of goods is passed for used or need replenishment/exchange.
1.14	Receive to Inventory	Move the QC passed quantity into inventory	Warehouse and QC Team	Quality Assurance Module	Passed goods are moved to warehouse.
1.15	Report to Supplier for Replacement	Report and negotiate with suppliers on how the QC failed items are to be replaced.	Purchasing Team	DMR Processing	Determine the goods exchange plan with supplier.
1.16	Prepare Goods Return and Perform Shipment	If the supplier is in China, the rejected goods should be returned to JH Site before returning to supplier. If the supplier is not in China, the rejected goods should be return to supplier directly.	Purchasing and Warehouse Team	Transfer Order and DMR Processing	Rejected goods returned to supplier or if the supplier is in China, it will return to JH Site.
1.17	Received to Inventory	Receive to JH Site Inventory and prepare to return the rejected goods to China supplier	Warehouse Team (JH)	Transfer Order Receipt	Received the rejected goods into JH Site and prepare the returning to supplier.

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1.18	Return Goods Received by Supplier	The rejected goods are received by the supplier	Supplier	N/A	The rejected goods are received by the supplier
1.19	Report to Supplier for Replenishment	Report and negotiate with the supplier for the replenishment without returning the QC failed items.	Purchasing Team	DMR Processing and PO Entry	Determine the goods replenishment plan with supplier.
1.20	Regrade Failed Materials	Regrade the failed materials and pass to inventory. Even if the materials are not usable and it is planned for replenishment, they should be moved to inventory as well.	Warehouse, QC and Purchasing Team	Lot Maintenance for defining grading of the lot.	Material regarded if required and moved into inventory. There are 4 colour variations and 3 grades. Hence, there are total of 12 combinations





BD1.3 REQUIREMENT AND PROPOSAL

#	User Pequirement	Our Proposal	Approach
1	When Sales Order (SO) is placed, the current ERP system does not clearly state the relation between SKU, quantity and destinations. Only the total quantity is entered in the SO. This requires the purchasing users to breakdown the quantity and destination manually. This is time consuming and affects the possibility of data import automation to supplier's system. User hopes Epicor could help on this. **Related to Process 1.6**	Our Proposal Need to change the mindset of users in the way of SO structure in Epicor, this needs help from management.	Customizations are needed on importing sales order and exporting requirements to supplier's system.
2	In order to use the full functions and abilities of MRP, MRP function implementation should be split into phases. **Related to Process 1.1 to 1.5**	Our suggestion: Phase 1: Receive data from PMC's system for PO creation in Epicor. Then run MRP for suggestion in modifying PO according to the inventory. Phase 2: After users are familiar with the operation in Phase 1 and trust the system suggestion. Full MRP function will be used before generating the PO. MRP, in this case, will give the net requirements.	Customization is needed for importing material requirement data from PMC's system (Costing Team system). After phase 1, the outcome should be reviewed and derive how to implement phase 2.
3	QC Alert Report – If aged materials are found, a QC request will be issued to QC to check whether the lot is good to use.	Report or alert function in Epicor	Report customization
4	On-Site QC Information Entry Related to Process 1.7	To be confirm and see if this is needed.	Need to customize a function, either in PO Entry or a completely new function.
5	Supplier Delivery Information Entry – After the goods had been delivered by Supplier and the supplier information the shipment date, status and ETA Date should be entered into Epicor for enquiry. **Related to Process 1.8a & 1.8b**	Goods delivered by Supplier and the supplier information the shipment date, status and ETA Date.	Need to customize the PO Entry function for entering such information. A new report/enquiry function should also be added.
6	Shipping information is needed for Transfer Orders from JH to BD. Related to Process 1.11 to 1.12	Add fields in Transfer Orders.	Customization is required in Transfer Orders operation flow and enquiry functions are needed to be built.
7	IQC control for materials transit from JH Site. Related to Process 1.13	In Epicor, since the materials had been received in inventory, Epicor will not automatically provoke the IQC process again. A customized function is required to trigger the IQC process for this type of goods transition.	Customizations are needed in PO Entry and Transfer Order Receipt. The automatic triggering of the IQC processing should use the backbone of Epicor's Non-Conformance operation flow to minimize the customization effort.
8	Material regarded if required and moved into inventory. There are 4 colour variations and 3 grades. Hence, there are total of 12 combinations.	Use Lot Control functions in Epicor to record the grades of each lot. Epicor cannot control which lot you use (or give suggestion on which grade to use)	No customization is required but need to proof the concept during the development stage.

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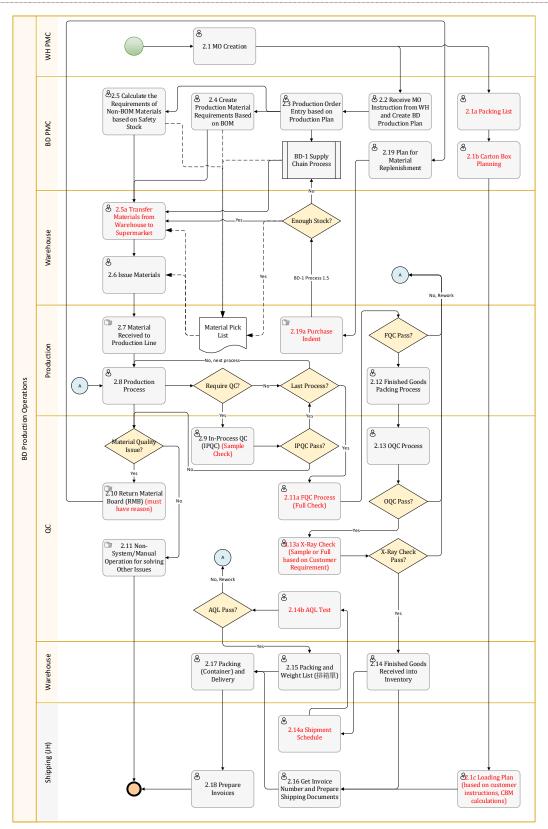


Related to Process 1.20	but users will be able to know the	
	grades combination in the inventory.	



BD-2 PRODUCTION PROCESS

BD2.1 WORKFLOW



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BD2.2 BUSINESS PROCESS MATCHING

BD Op	BD Operations Production Process – Business Process Matching						
Busine	Business processes participate in the discussion staff:						
Step	Step Desc.	Process Condition	Role	Epicor	ExpectedResult		
2.1	MO Creation	PMC Create MO (with File Number) based on the delivery schedule provided by customers.	WH PMC (Costing Team)	Order Entry > Job Entry	MO Created for Production and Material Planning Calculations		
2.1a	Packing List	After the MO is created, the packing list is created.	Shipping? PMC?	An updatable Dashboard showing the Sales Order > Release data for user to update and group the packing list. Customization requires.	Packing list and a preliminary delivery schedule is defined.		
2.1b	Carton Box Planning	Based on the Packing List in 2.1a, plan the carton box requirements.	PMC	Purchase Order and MRP, also consider adding the carton into the BOM for easier planning.	Carton boxes are planned and purchase.		
2.1c	Loading Plan (Based on Customer Instructions, CBM Calculations)	Prepare a loading plan on how to pack the finished goods into the shipping containers. For use in process 2.17.	Shipping	A new customized function is required.	A Loading Plan is created for shipping containers packing.		
2.2	Receive MO Instruction from WH and Create BD Production Plan	Based on the MO, a production plan is created for the upcoming months and updated every week	BD PMC	Job Scheduling functions	Production plan created		
2.3	Production Order Entry based on Production Plan	Production Order is create based on the production plan	BD PMC	Job Entry and Job Manager	Production Order created		
2.4	Create Production Material Requirements based on BOM	Calculate the materials to be issued to production shopfloor based on the BOM with normal scrap rate.	BD PMC	Job Traveler, customization may be needed if materials for several orders are required to be consolidated.	Material Pick List is created for material issue		
2.5	Calculate the Requirements of Non-BOM Materials based on Safety Stock	Some of the materials (e.g. thread, oil, etc.) are not setup in BOM as there is a special usage rule instead of a standard usage. The issue quantity is calculated based on the safety stock level in the shopfloor	BD PMC	MOM setup and MRP. Customization is needed for calculating the usage, but this needs in-depth discussion.	Material Pick List is created for material issue		



2.5a	Transfer Materials from Warehouse to Supermarket	The materials for production are transferred to the supermarket before issuing to the shop floor. The ownership of the materials still belongs to warehouse.	Warehouse	Quantity Transfer with customization.	Materials transferred to supermarket for production use.
2.6	Issue Materials	Materials are being prepared to be issued to the shop floor. The issuing location depends on the production process.	Warehouse	Material Issue to Shop Floor/Mass Issue	Warehouse team prepares the materials for issuing
2.7	Material Received to Production Line	Materials are received to production line.	Production	N/A	Materials are ready to use in production line
2.8	Production Process	There should be multiple production processes and could be performed parallelly or linearly. Refer to BD2.4 #4 for some of the processes.	Production	Bill of Operation (BOO) and Production Operation Routing	The semi-products and product are being produced step-by-step.
2.9	In-Process QC (IPQC) (sample check)	Not all the production processes require IPQC. Only some important steps require this QC process.	QC & Production Team	Setup QC Entry in Time Entry	QC is performed after certain processes are completed.
2.10	Return Material Board (RMB) (must have reason)	If the quality problem is caused by material quality issue, a dedicated group of people consists of production, QC and sales team will confirm the situation and approve the replenishment of the materials. Reason must be entered for the return.	QC, Production and Sales Team	Non-conformance and DMR Processing	The material quality issue is confirmed, and the replenishment plan is setup.
2.11	Non- System/Manual Operation for Solving Other Issues	If the quality problem is caused by reasons other than material quality, the problem is to be solved out of the system before continuing the production process	QC, Production and Sales Team	N/A	The production flow is stopped and to be continued after the problem is solved.
2.11a	FQC Process (Full Check)	After the last production process and before the packing process, the product must be checked. They can only be packed and proceed if the FQC is passed.	QC & Production Team	Setup QC Entry in Time Entry	Final QC is performed after the final production process is completed and before the packing process. The fail finished goods will be reworked.
2.12	Finish Goods Packing Process	After the last production process, the finished goods are packed and ready for the OQC.	Production	Bill of Operation (BOO) and Production Operation Routing	The products are completed and packed in carton boxes.



2.13	OQC Processes	Outgoing QC is performed before the x-ray scan.	QC and Warehouse Team	Bill of Operation (BOO) and Production Operation Routing Or Non-conformance and DMR Processing	After the QC, there are mainly two results: 1) Passed and the finished goods can proceed to the next step. 2) Failed and the problematic products will be sent back to shop floor for rework.
2.13a	X-Ray Check (Sample or Full based on Customer Requirement)	X-Ray Check QC is performed before receiving to warehouse. The x-ray scan for metal debris and whether it is a sample or full check depends on the customers.	QC and Warehouse Team	Bill of Operation (BOO) and Production Operation Routing Or Non-conformance and DMR Processing	After the QC, there are mainly two results: 3) Passed and the finished goods can be received to warehouse. 4) Failed and the problematic products will be sent back to shop floor for rework.
2.14	Finished Goods Received to the Inventory	The QC Passed FG is received into warehouse.	Warehouse	Production Receipt	The FG is received into warehouse and prepare for shipment.
2.14a	Shipment Schedule	A final shipment schedule is prepared	Shipping	An updatable Dashboard showing the Sales Order > Release data for user to update and group the shipment schedule. Customization requires.	Shipment schedule is defined.
2.14b	AQL Test	The finished goods are QC checked before shipment. If the QC is passed, they can move on to the next steps. Otherwise, they are reworked.	QC	Non-conformance and DMR Processing	The finished goods are QC checked and ready for shipment or rework.
2.15	Packing and Weight List (排箱 單)	The FG is packed according to the customer's requirement. When warehouse receives the carton packed FG, the cartons will be weighed to ensure the weight variances are within limits. The Packing and Weight List report is then created	Warehouse	PCID Module. A customized function might be required to simplify the entry. A customized report is also needed.	Packing and Weight List report is created.
2.16	Get Invoice Number and Prepare Shipping Documents	To ensure the same invoice number is used all the way in the shipping documents, an invoice number is created before the shipment.	Shipping	Customization needed.	Shipping document set with consistent invoice number.

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2.17	Packing (Container) and Delivery	Ton Pack the packed carton boxes into shipping containers and prepare shipment.	Warehouse	Shipment Entry and customized report for shipping documents.	FG is being shipped to the customer.
2.18	Prepare Invoices	After the shipment is confirmed, shipping will create the invoices in the ERP system for accounting purposes. The actual billing invoices to the customers are created using Excel out of the system.	Shipping	Shipment Invoice and report customization	Billing invoices sent to customers.
2.19	Plan for Material Replenishment	When rework is needed or material quality issue is approved by RMB, PMC will plan for the material replenishment. If further purchase is required, the process flow starting from PI entry in the OA system is required.	PMC and Purchasing Team	Job Material Entry for Rework, DMR Processing and MRP	Material replenishment plan
2.19a	Purchase Indent	With the material problem found during the productions, purchase indent (purchase requisition) is required for the request on material replenishment. If there is enough stock, no purchase is required.	Production	Requisition Entry	Purchase Indent (Requisition) for warehouse to check for inventory or purchasing team for procurement.





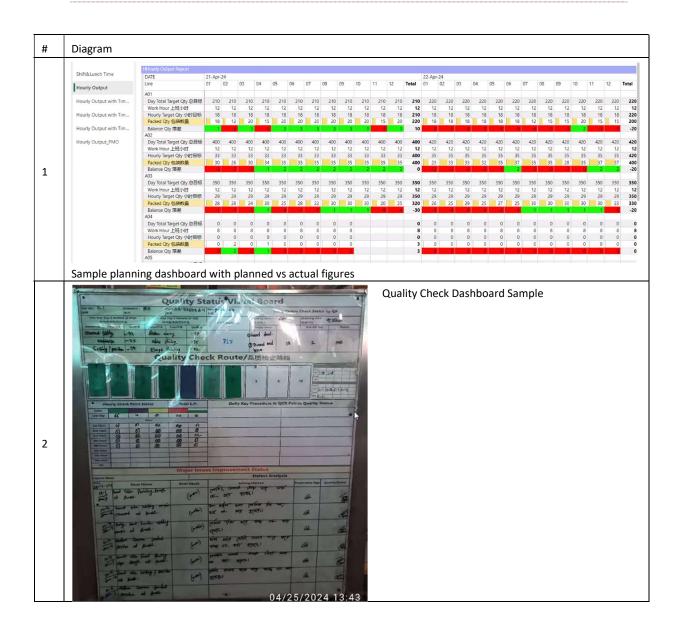
BD2.3 REQUIREMENT AND PROPOSAL

#	User Requirement	Our Proposal	Approach
1	Packing and Weight List (排箱單) Related to Process 2.15	PCID Module and report customizations.	The PCID functions require customizations to simplify the entry process.
2	The current WMS is one way connected to the ERP system. Discrepancies will always happen after a while.	Use Epicor's Mobile Warehouse or a WMS that can interfaced with Epicor in a two-way manner.	Need further discussions.
3	Get the invoice number before shipment. Related to Process 2.16	In Epicor, invoice number can only be generated after the shipment. Customization is needed to create an invoice number before the shipment and relate it back to the invoice generated after the shipment. The invoice before shipment can be generated based on SO.	Customization needed. Detail to be discussed.
4	Shipping documents Related to Process 2.16 and 2.17	Report Customization can be performed by PreTech or Ventura's IT Team	Report Customization
5	Different dashboards are required	Samples could be referred to BD2.4.	Full set of required dashboards to be provided by users and we will discuss whether PreTech or Ventura's IT Team will perform the customizations.
6	Two Stages for shipment schedule: 1. Pack List before production and actual shipment. 2. Shipment Schedule Related to Process 2.1a and 2.14a	Add an updatable Dashboard showing the Sales Order > Release data for user to update and group the selected SO shipment into one packing list. A packing list number can also be assigned at stage 1. At stage 2, the final shipment date and packing list can be assigned to the SO Release.	Customization needed. Detail to be discussed.
7	Loading Plan Related to Process 2.1c	A new customized function is required. This function will have the shipping container information and packing instructions with CBM controls/calculations.	Customization needed. Detail to be discussed.
8	Materials Transfer to Supermarket Related to Process 2.5a	Customize the quantity transfer function that it can transfer the materials based on job orders.	Customization needed. Detail to be discussed.
9	Inspection Plan setup Related to Processes 2.9, 2.11a, 2.13, 2.13a and 2.14b	Use the Epicor Configurator function to set up detail QC plans. We need to investigate how many inspection plans there are.	The function is open to use but requires programming skill. We will decide whether PreTech or Ventura will perform the setup.
10	Connection to TMIS	Create a data interface between Epicor and TMIS that transfer the required data from Epicor to TMIS.	Customization required. Detail to be discussed.

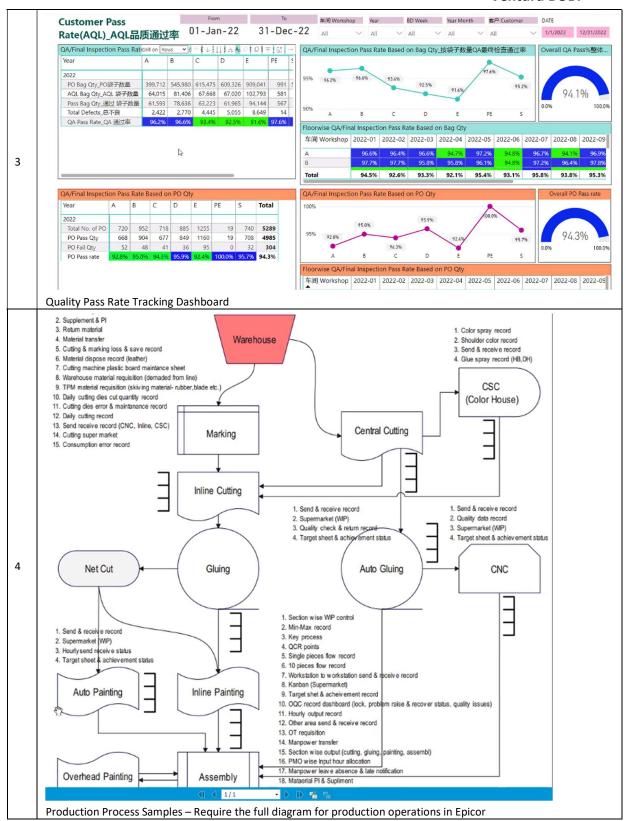




BD2.4 APPENDIX - REFERENCE DIAGRAMS





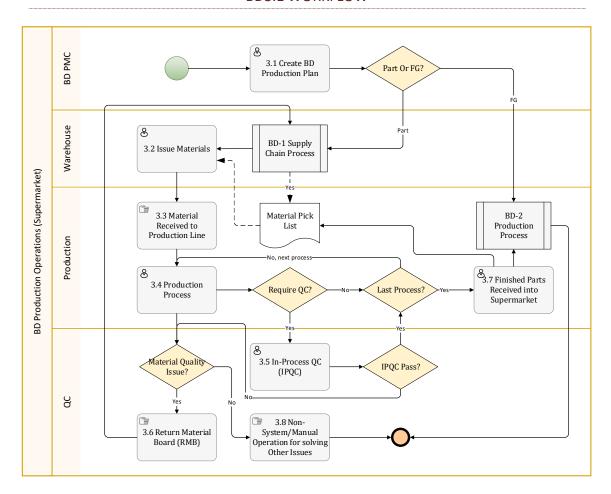


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BD-3 PRODUCTION PROCESS (SUPERMARKET)

BD3.1 WORKFLOW







BD3.2 BUSINESS PROCESS MATCHING

BD Operations Production Process (Supermarket) – Business Process Matching						
Business processes participate in the discussion staff:						
Step	Step Desc.	Process Condition	Role	Epicor	ExpectedResult	
3.1	Create BD Production Plan	Production Order is create based on the production plan	BD PMC	Job Entry and Job Manager	Production Order created	
3.2	Issue Materials	Materials are being prepared to be issued to the shop floor. The issuing location depends on the production process.	Warehouse	Material Issue to Shop Floor/Mass Issue	Warehouse team prepares the materials for issuing	
3.3	Material Received to Production Line	Materials are received to production line.	Production	N/A	Materials are ready to use in production line	
3.4	Production Process	There should be multiple production processes and could be performed parallelly or linearly. Refer to BD2.4 #4 for some of the processes.	Production	Bill of Operation (BOO) and Production Operation Routing	The semi-products and product are being produced step-by-step.	
3.5	In-Process QC (IPQC)	Not all the production processes require IPQC. Only some important steps require this QC process.	QC & Production Team	Setup QC Entry in Time Entry	QC is performed after certain processes are completed.	
3.6	Return Material Board (RMB)	If the quality problem is caused by material quality issue, a dedicated group of people consists of production, QC and sales team will confirm the situation and approve the replenishment of the materials.	QC, Production and Sales Team	Non-conformance and DMR Processing	The material quality issue is confirmed, and the replenishment plan is setup.	
3.7	Finished Parts Received to Supermarket	The QC Passed parts are received into supermarket.	Production	Production Receipt	The part is received into supermarket and ready to use in the production of FG or other parts.	
3.8	Non- System/Manual Operation for Solving Other Issues	If the quality problem is caused by reasons other than material quality, the problem is to be solved out of the system before continuing the production process	QC, Production and Sales Team	N/A	The production flow is stopped and to be continued after the problem is solved.	



BD3.3 REQUIREMENT AND PROPOSAL

#	User Requirement	Our Proposal	Approach





APPENDIX - OTHER REQUIREMENTS

#	User Requirement	Our Proposal	Approach
1	Receiving tolerance of PO, The PO considered to be completed or normal within a preset range. This means the PO can be under or over received. If the received quantity is within range, the supplier can get the full payment.		
2			
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